Course of Study General Engineering Science (English program) (Study Cohort w14)
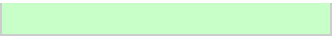
Sample course plan C Bachelor General Engineering Science (English program) (GESBS)
Specialisation Mechanical Engineering, Focus Biomechanics

LP: 1–34

Semester 1 (Form, Hrs/wk)

Chemistry (GES)
- Chemistry I — VL 2
- Chemistry II — VL 2
- Chemistry I — HÜ 1
- Chemistry II — HÜ 1

Linear Algebra
- Linear Algebra — VL 4
- Linear Algebra — HÜ 2
- Linear Algebra — UE 2

Electrical Engineering I
- Electrical Engineering I — VL 3
- Electrical Engineering I — UE 2

Mechanics I (GES)
- Mechanics I — VL 2
- Mechanics I — HÜ 3

Physics for Engineers (GES) (part 1)
- Physics for Engineers — VL 2
- Physics for Engineers — UE 1

Semester 2 (Form, Hrs/wk)

Physics for Engineers (GES) (part 2)
- Physics-Lab for ET/IIW-Engineers — PR 1

Fundamentals of Mechanical Engineering Design
- Fundamentals of Mechanical Engineering Design — VL 2
- Fundamentals of Mechanical Engineering Design — HÜ 2

Technical Thermodynamics I
- Technical Thermodynamics I — VL 2
- Technical Thermodynamics I — HÜ 1
- Technical Thermodynamics I — UE 1

Mathematical Analysis
- Mathematical Analysis — VL 4
- Mathematical Analysis — HÜ 2
- Mathematical Analysis — UE 2

Electrical Engineering II
- Electrical Engineering II — VL 3
- Electrical Engineering II — UE 2

Mechanics II (GES)
- Mechanics II — VL 2
- Mechanics II — HÜ 2

Semester 3 (Form, Hrs/wk)

Technical Thermodynamics II
- Technical Thermodynamics II — VL 2
- Technical Thermodynamics II — HÜ 1
- Technical Thermodynamics II — UE 1

Computer Engineering
- Computer Engineering — VL 3
- Computer Engineering — UE 1

Mathematics III
- Analysis III — VL 2
- Analysis III — UE 1
- Analysis III — HÜ 1
- Differential Equations 1 — VL 2
- Differential Equations 1 — UE 1
- Differential Equations 1 — HÜ 1

Mechanics III (GES)
- Mechanics III — HÜ 1
- Mechanics III — UE 2
- Mechanics III — VL 3

Mechanical Engineering: Design (part 1)
- Embodiment Design and 3D-CAD — VL 2
- Mechanical Design Project I — TT 3

Fundamentals of Materials Science (part 1)
- Fundamentals of Materials Science I — VL 2
- Physical and Chemical Basics of Materials Science — VL 2

Semester 4 (Form, Hrs/wk)

Mechanical Engineering: Design (part 2)
- Team Project Design Methodology — POL 2
- Mechanical Design Project II — TT 3

Fundamentals of Materials Science (part 2)
- Fundamentals of Materials Science II — VL 2

Signals and Systems
- Signals and Systems — VL 3
- Signals and Systems — HÜ 1

Fluid Dynamics
- Fluid Mechanics — VL 3
- Fluid Mechanics — HÜ 1

Mechanics IV (Kinetics II, Oscillations, Analytical Mechanics, Multibody Systems)
- Mechanics IV — VL 3
- Mechanics IV — UE 2
- Mechanics IV — HÜ 1

MED I: Medical Basics I
- Introduction to Radiology and Radiation Therapy — VL 2
- Introduction to Anatomy — VL 2

Advanced Materials
- Advanced Materials Characterization — VL 2
- Advanced Materials Design — VL 2
- Advanced Materials Design — HÜ 2

Semester 5 (Form, Hrs/wk)

Introduction to Control Systems
- Introduction to Control Systems — VL 2
- Introduction to Control Systems — UE 2

Measurement Technology for Mechanical and Process Engineers
- Measurement Technology for Mechanical and Process Engineers — VL 2
- Measurement Technology for Mechanical and Process Engineers — HÜ 1
- Practical Course: Measurement and Control Systems — PR 2

BIO I: Implants and Testing (part 1)
- Implants and Fracture Healing — VL 2

MED II: Medical Basics II (part 1)
- Introduction to Biochemistry and Molecular Biology — VL 2

Numerical Mathematics I
- Numerical Mathematics I — VL 2
- Numerical Mathematics I — UE 2

Heat Transfer
- Heat Transfer — VL 3
- Heat Transfer — HÜ 1

Semester 6 (Form, Hrs/wk)

Foundations of Management
- Introduction to Management — VL 4
- Project Entrepreneurship — POL 2

BIO I: Implants and Testing (part 2)
- Experimental Methods in Biomechanics — 2

MED II: Medical Basics II (part 2)
- Introduction to Physiology — VL 2

Bachelor Thesis

35	**Programming in C**		
36	Programming in C	VL	1
	Programming in C	PR	1

Nontechnical Complementary Courses for Bachelors (from catalogue) - 6LP

The choice of courses from the catalogue is flexible (depends on the semestral work load), provided the necessary number of required credits is reached.